Beyond the Outer Limits

DARPA

ATO Comms

Advanced Technology Office

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Communication for Military Operations ...an Old Warfare Requirement

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ATO On-going Projects

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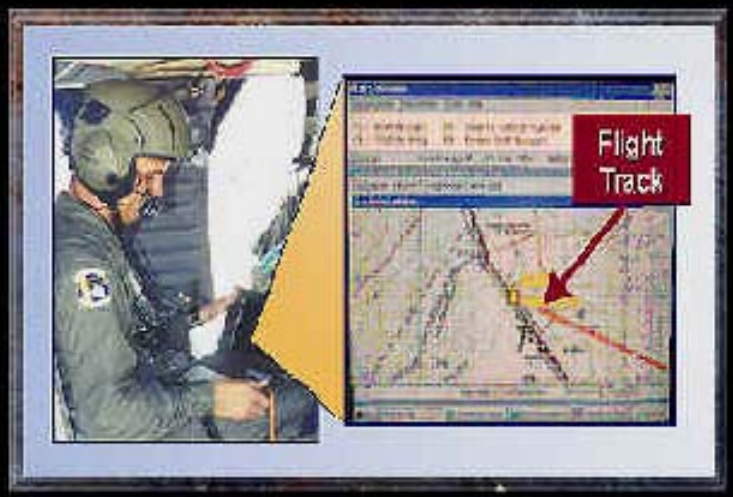
Better Prepared and Comms Equipped U.S. Forces



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Operations in Distant Theaters

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Deployed US Forces/Coalition Operations

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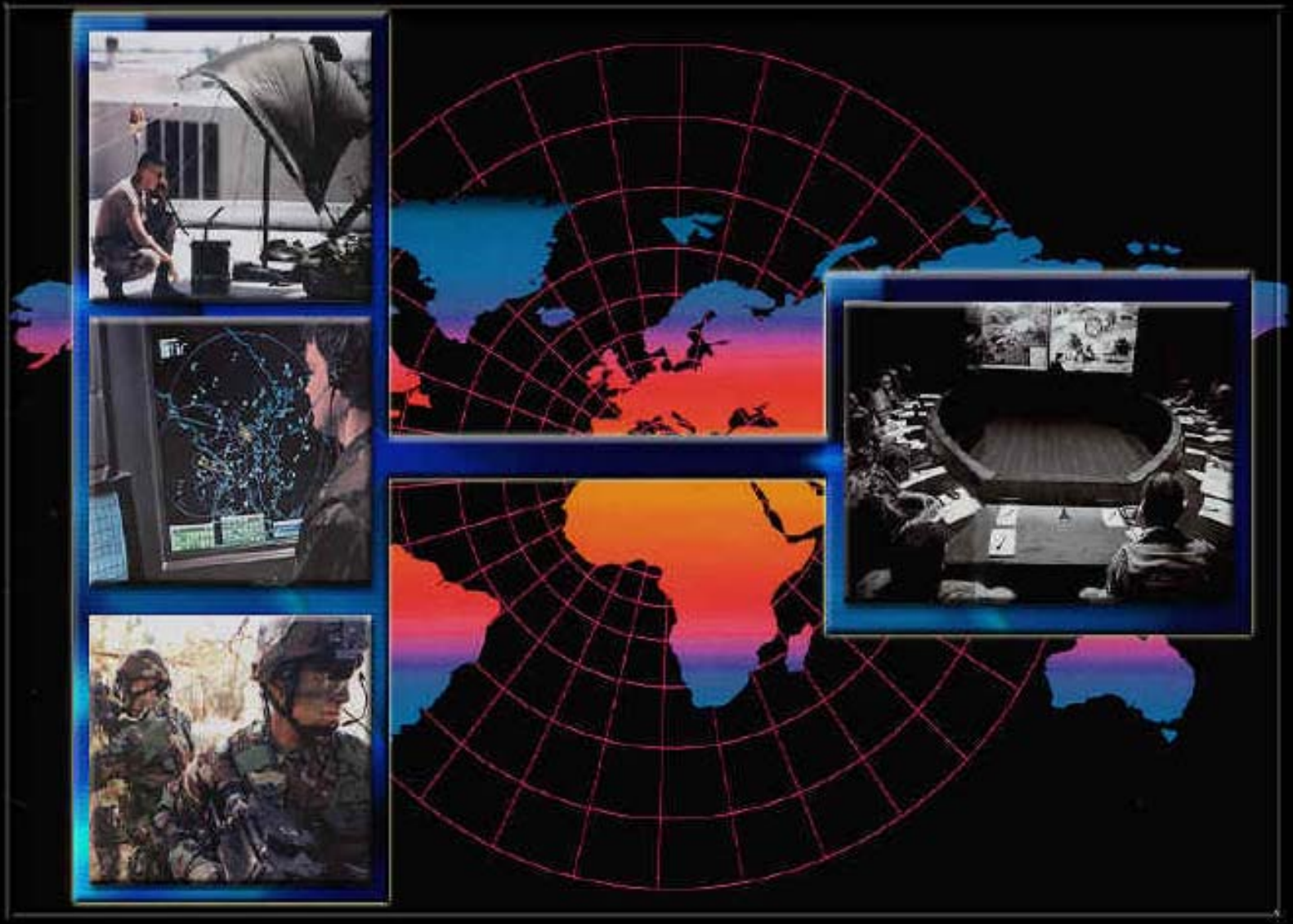
...The need for near-real-time communications



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Radio frequency challenge in Bosnia...

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Hampered Communications in Mogadishu...

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Current operations in Afghanistan...

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ATO Communications
...addressing three major challenges

Multi-Band Platforms

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ATO Communications
...addressing three major challenges

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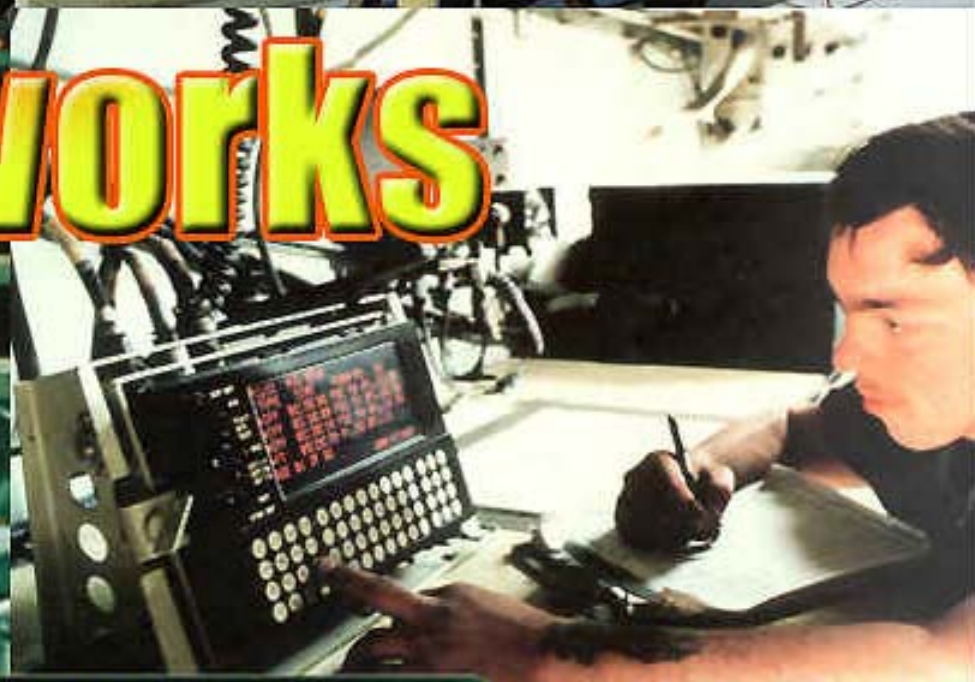
ATO Communications
...addressing three major challenges

Mobile ad hoc Networks



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ATO Communications
...addressing three major challenges

Focusing on three areas of development:

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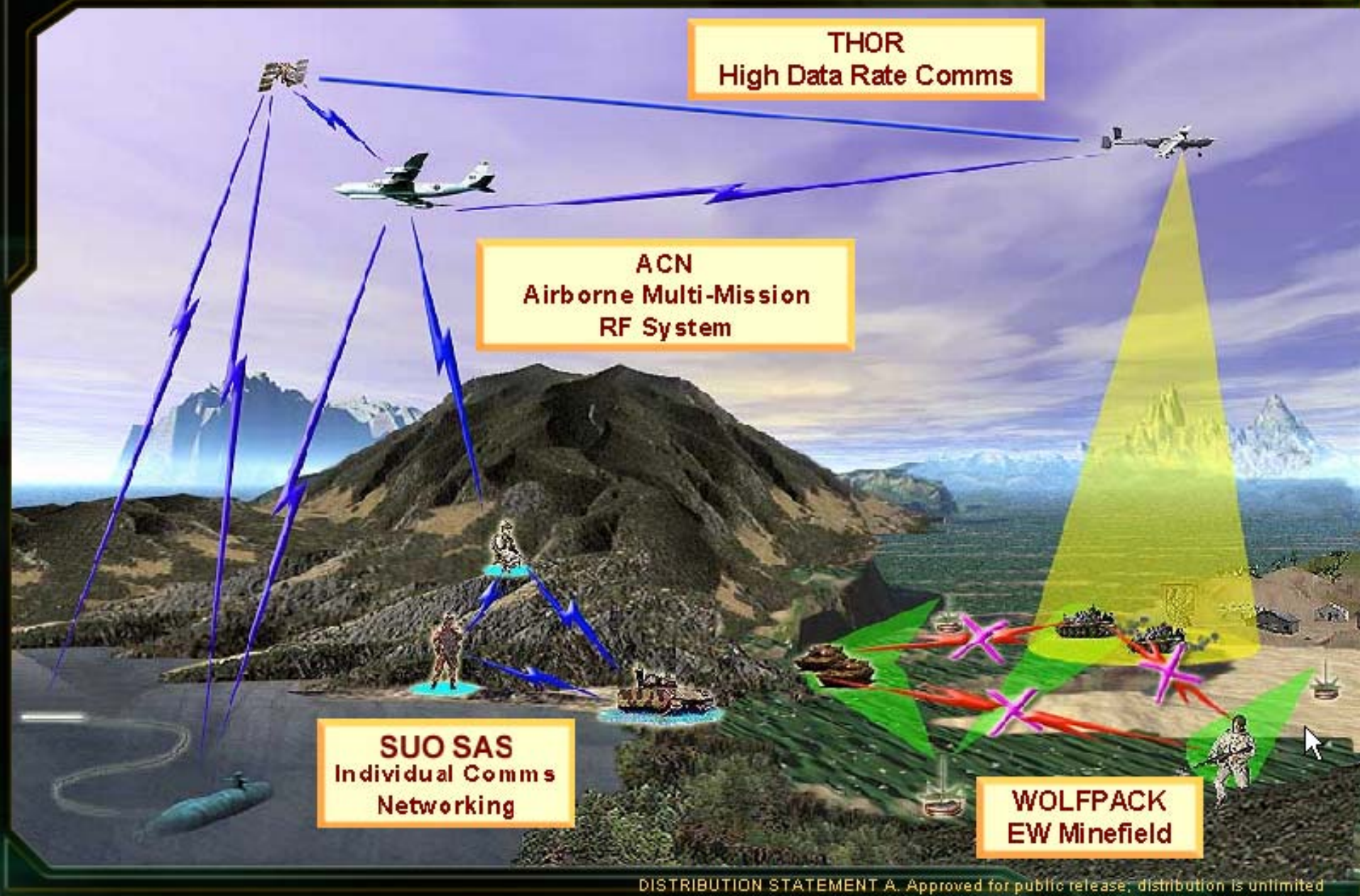
ATO Communications



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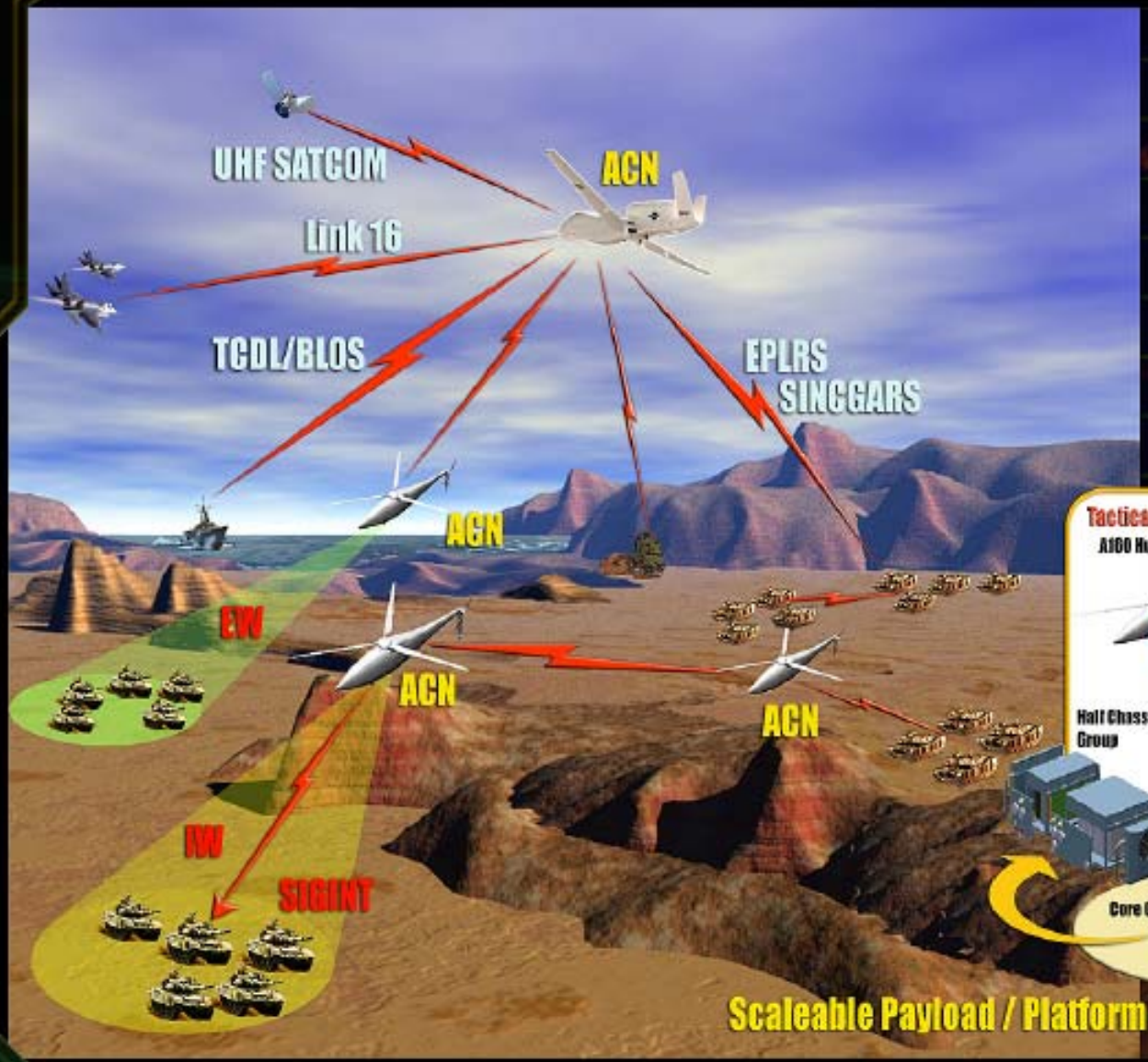
Adaptive C4ISR Node (ACN)



A multi-mission "RF" system that provides seamless interoperable Communications, simultaneously with SIGINT, EW and IO capabilities

Scaleable Payload / Platform Independent / Multifunctional

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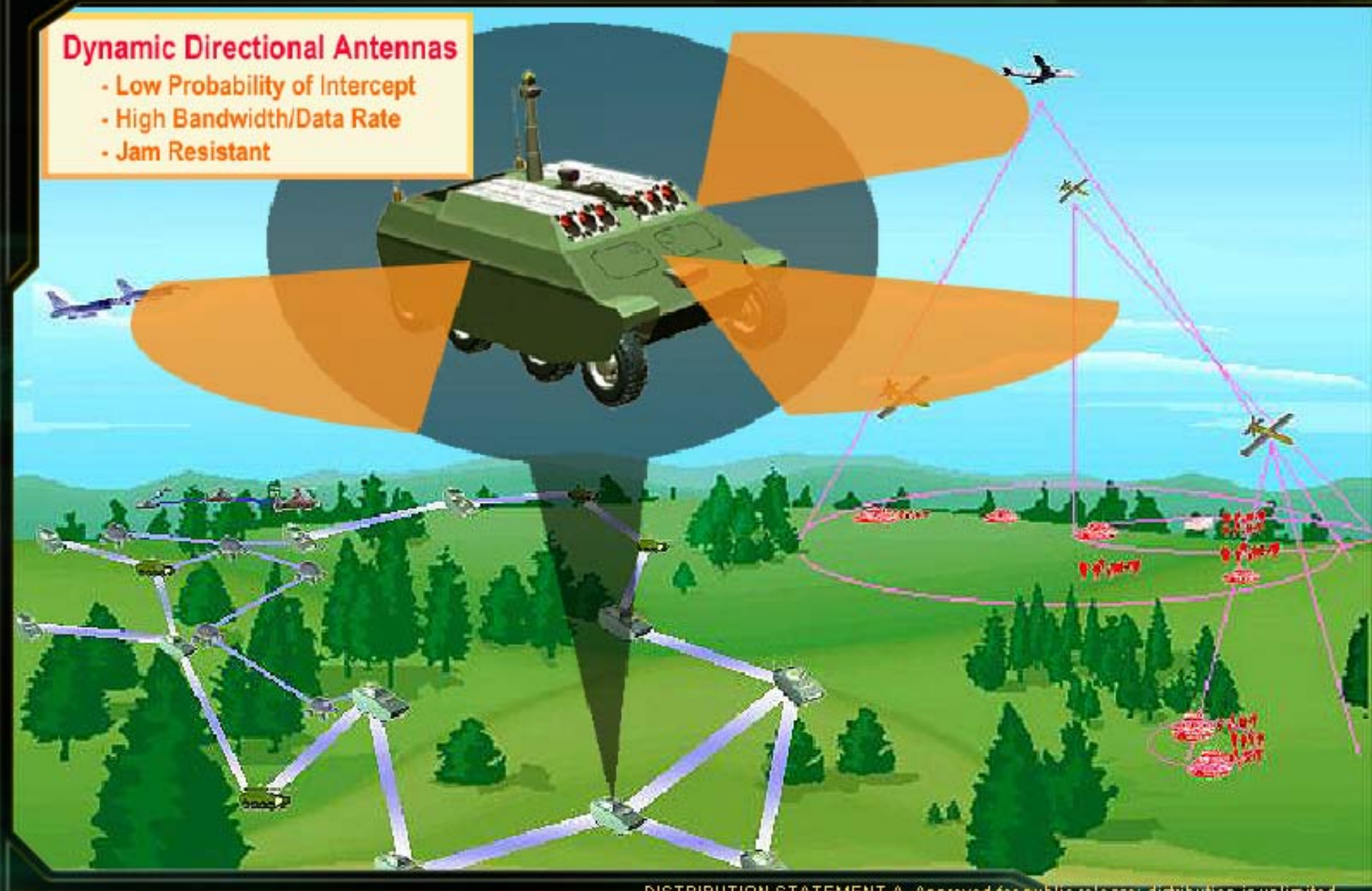
FCS Comms



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SUO SAS

Unprecedented Tactical-level Communications and Situational Awareness

3 Estimate position anywhere, anytime

4 Relevant picture of the battle space

2 Robust mobile ad hoc network

SUO SAS Answers:

Where am I?

Where are my buddies?

Where is the enemy?

1 Maintain secure LPI/LPD communication in any environment

5 Execution monitoring mission planning

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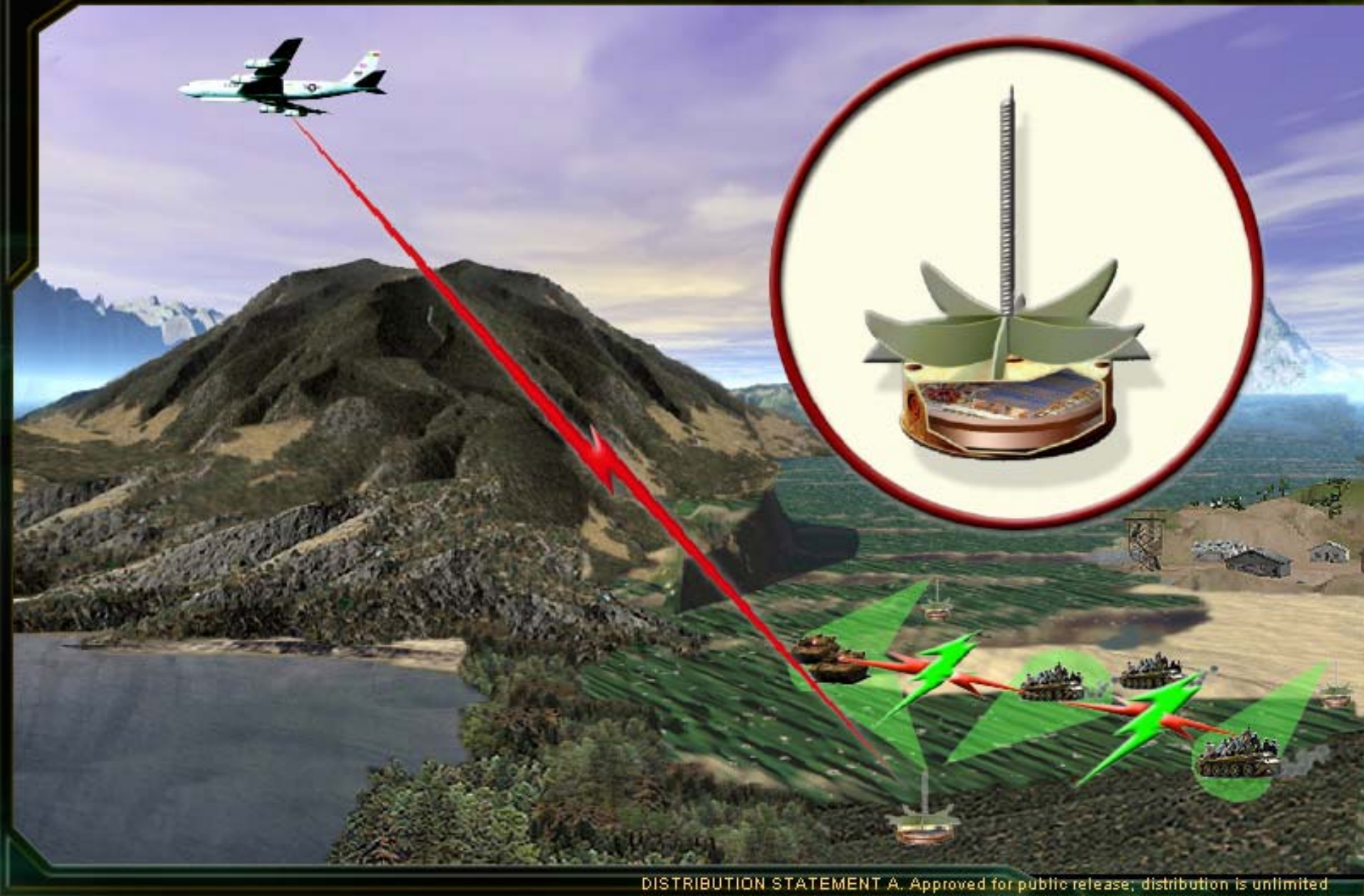
Wolfpack



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Networking in Extreme Environments (NETEX)

Urban and Special Operations

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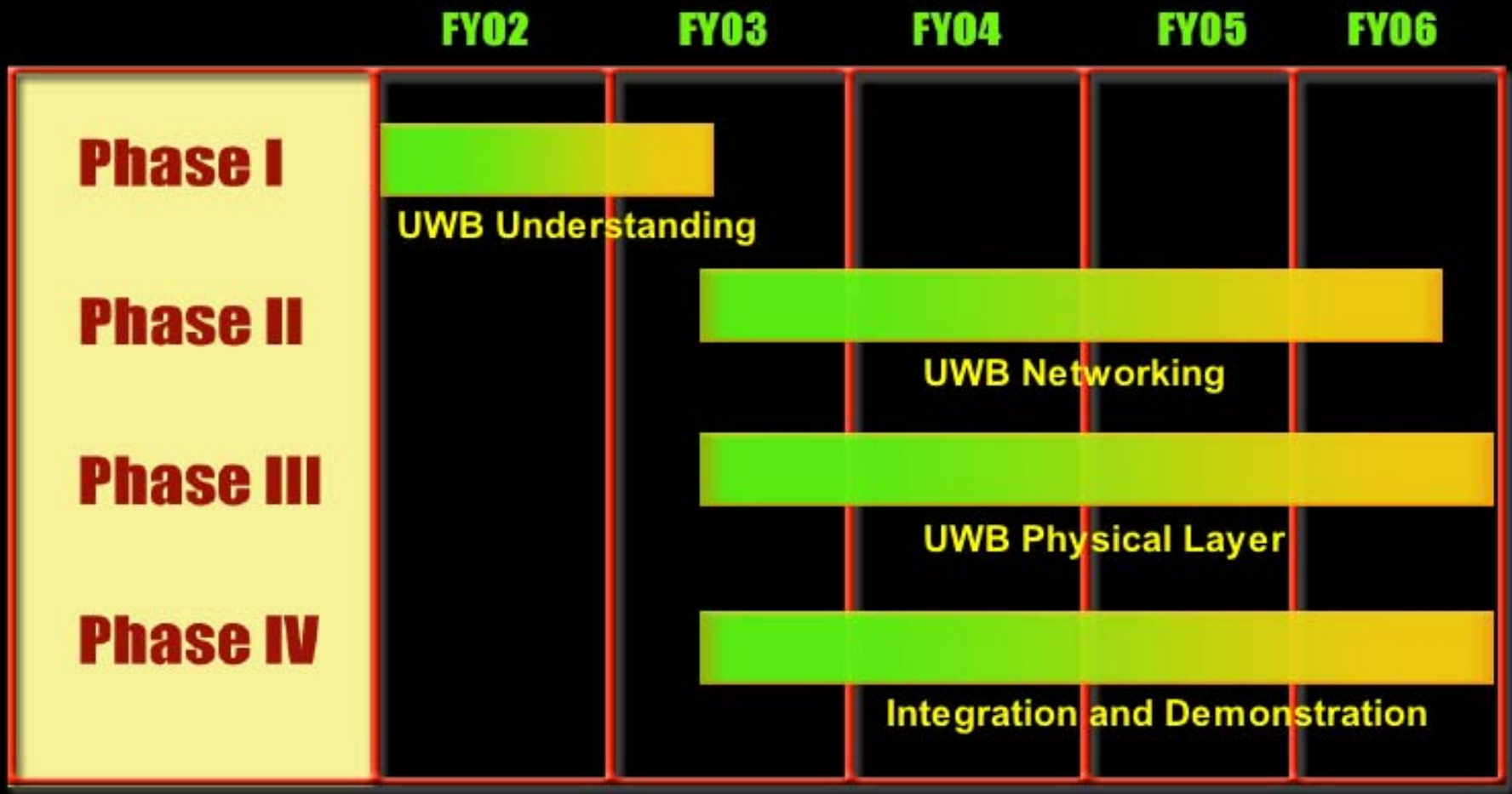
NETEX Timeline



Robust Wireless Network in Harsh Environment

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NETEX
Experiments and Integration

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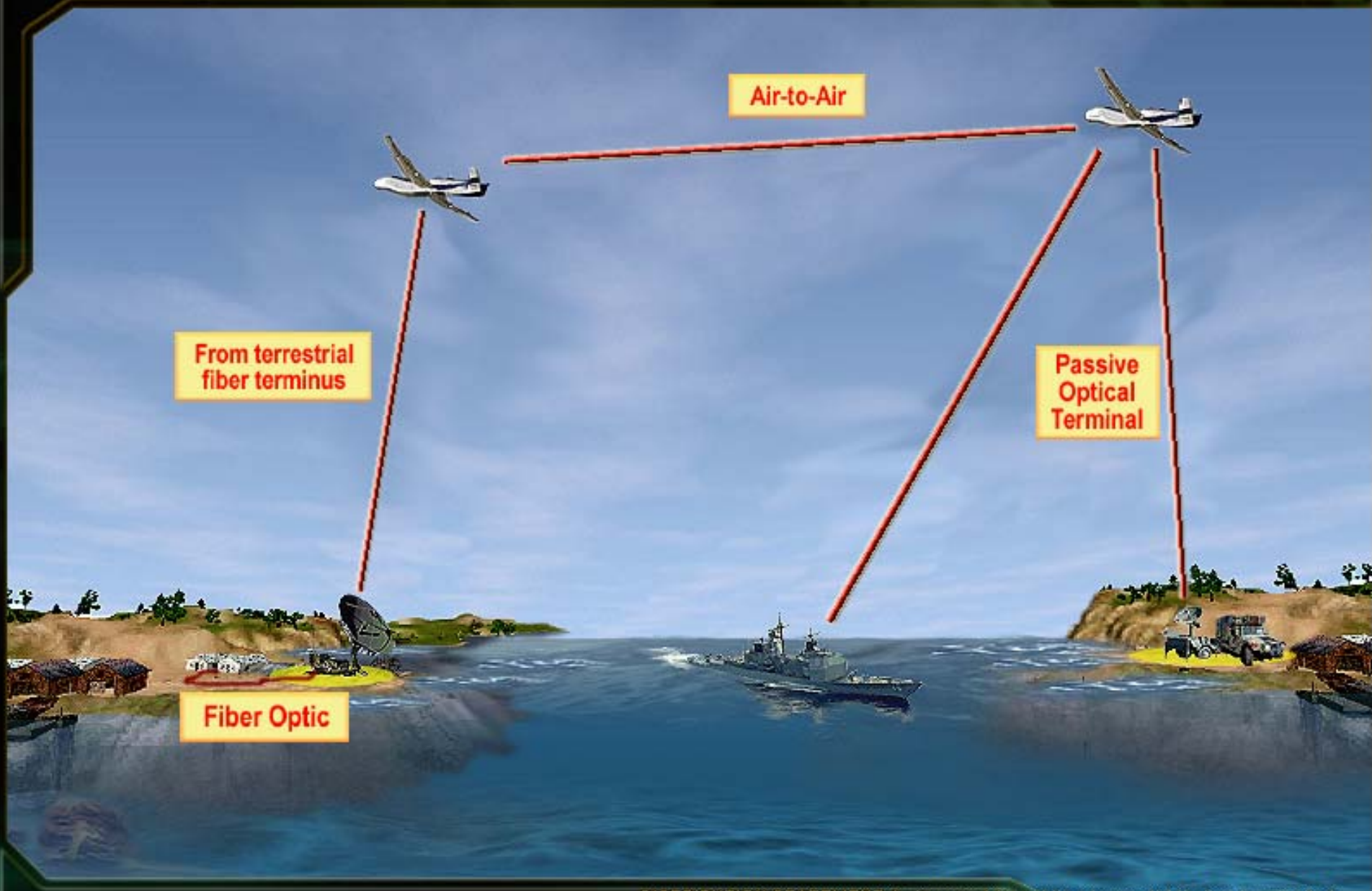
Terra Hertz Operational Reachback (THOR)



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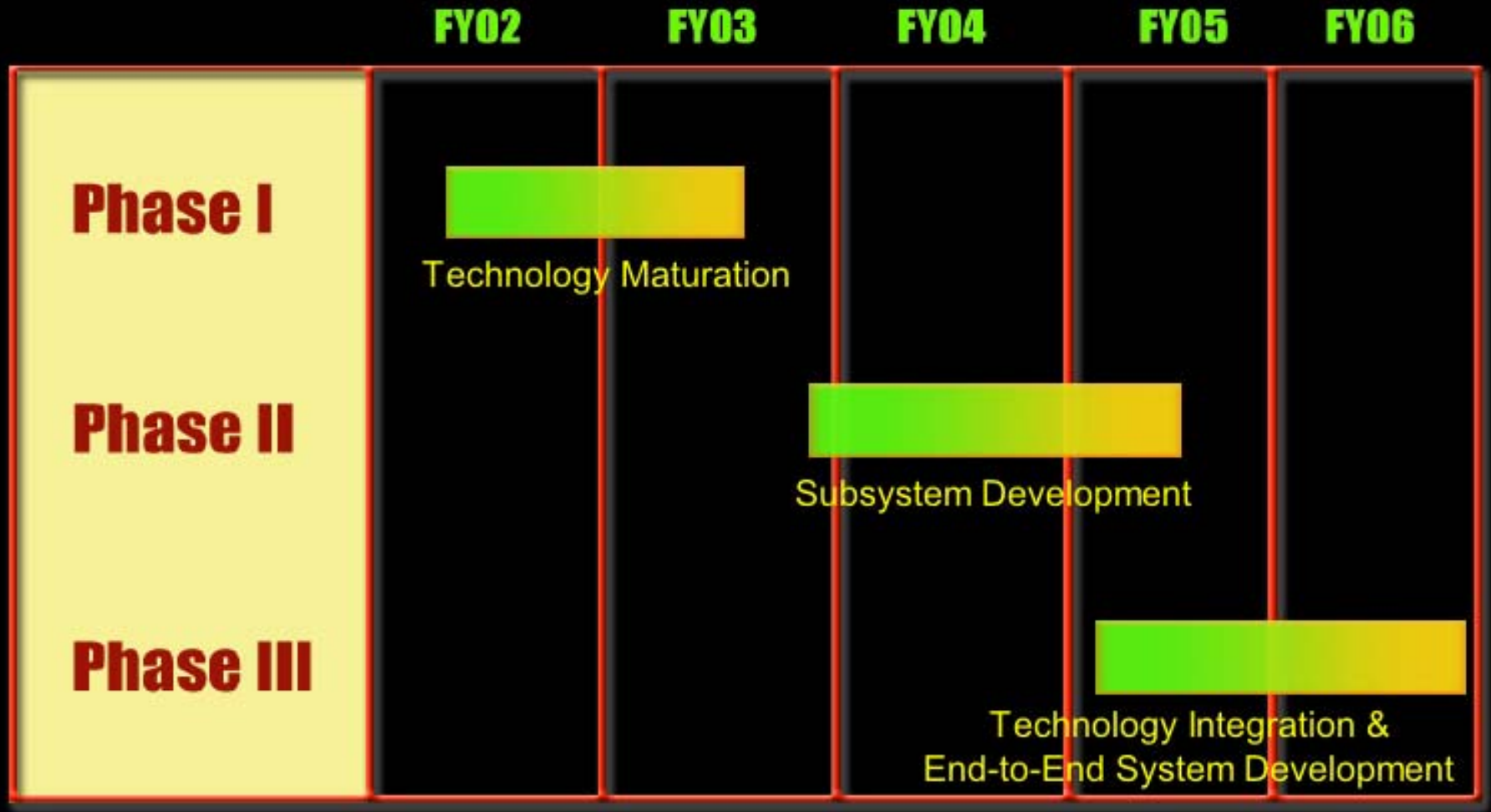
THOR Timeline



Flexible Broadband Connectivity to Any Point on the Globe

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